



E00-102 Meeting

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Old Dominion University

JLAB, Sept 26 2006

Calculations

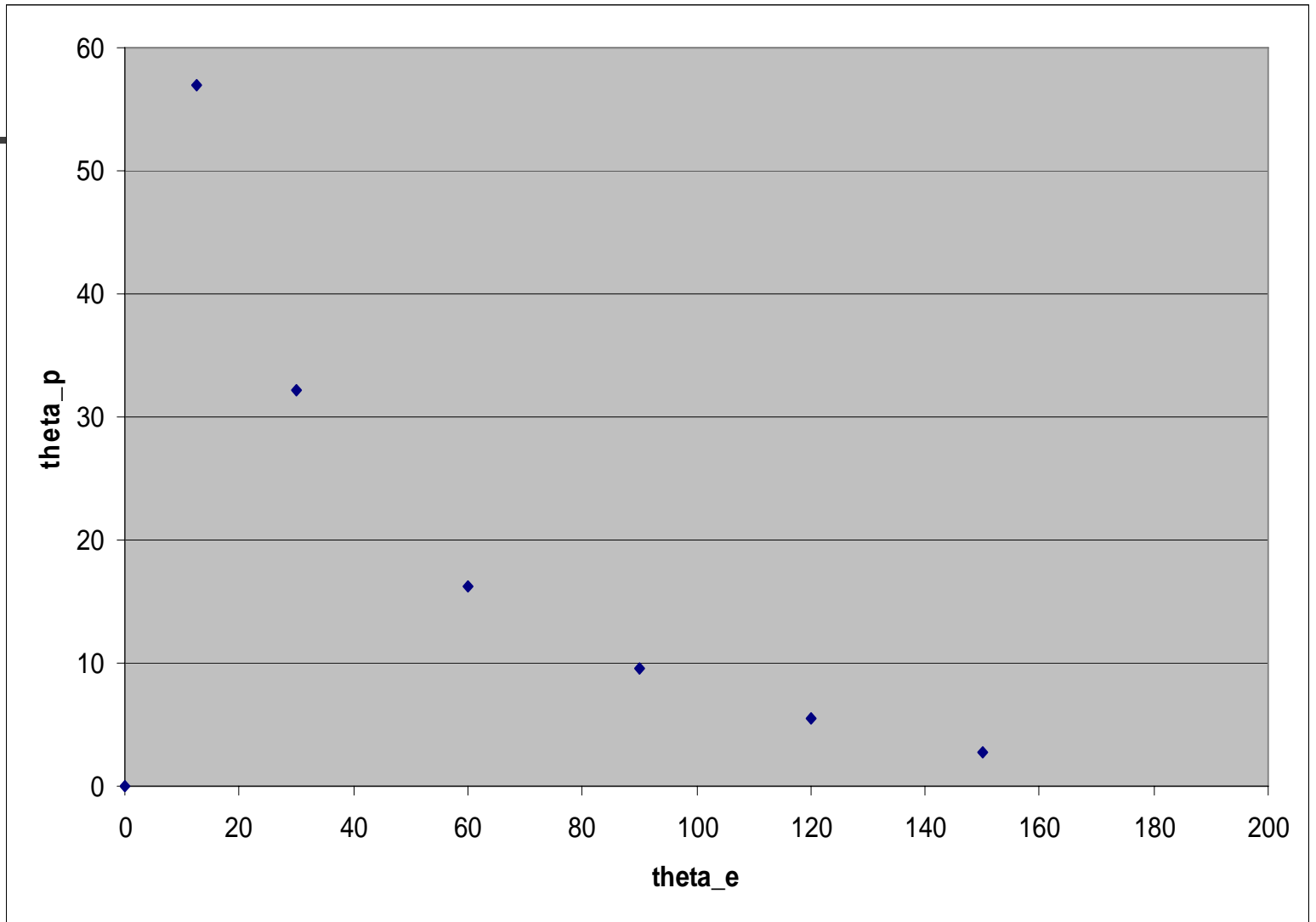
• Proton's angle

$$\cos \theta_p = \left[\frac{(E - E' \cos \theta_e)^2}{(E - E')^2 + 2(E - E')M_p} \right]^{1/2} \quad (1)$$

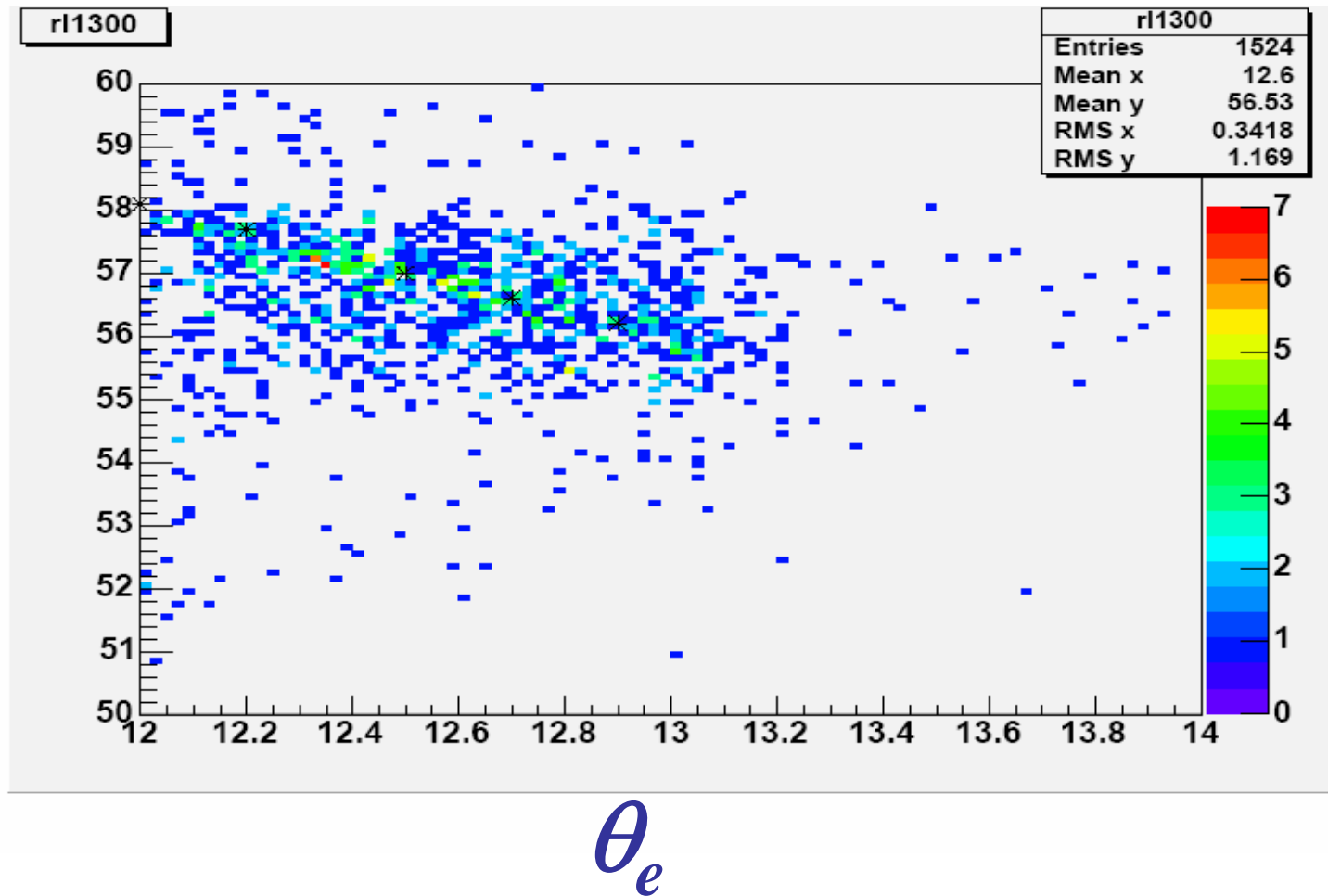
• Scattered electron energy

$$\frac{E'}{E} = \left[1 + \frac{1}{M_p} \left(2 \sin^2 \frac{\theta_e}{2} \right) \right]^{-1} \quad (2)$$

Calculations - plot



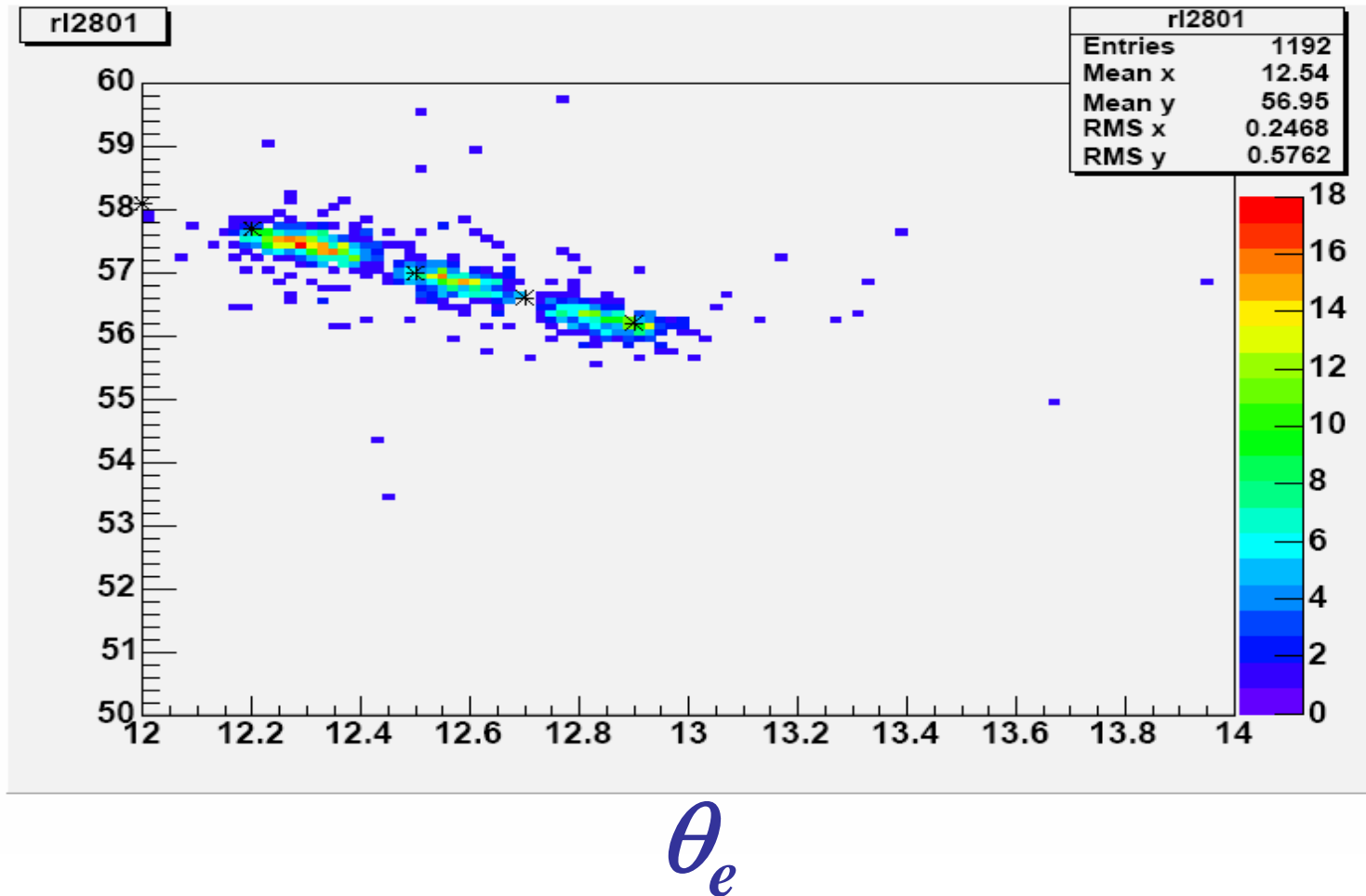
Sieve Slit Run (1300), R arm, qq-kin



Note: starred-points are from calculation using Equation (1)

Cuts: Single track and $E_m = 8$ MeV

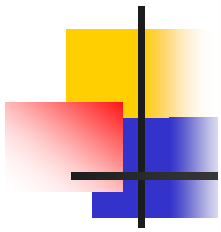
Sieve Slit Run (2801), L arm, qq-kin



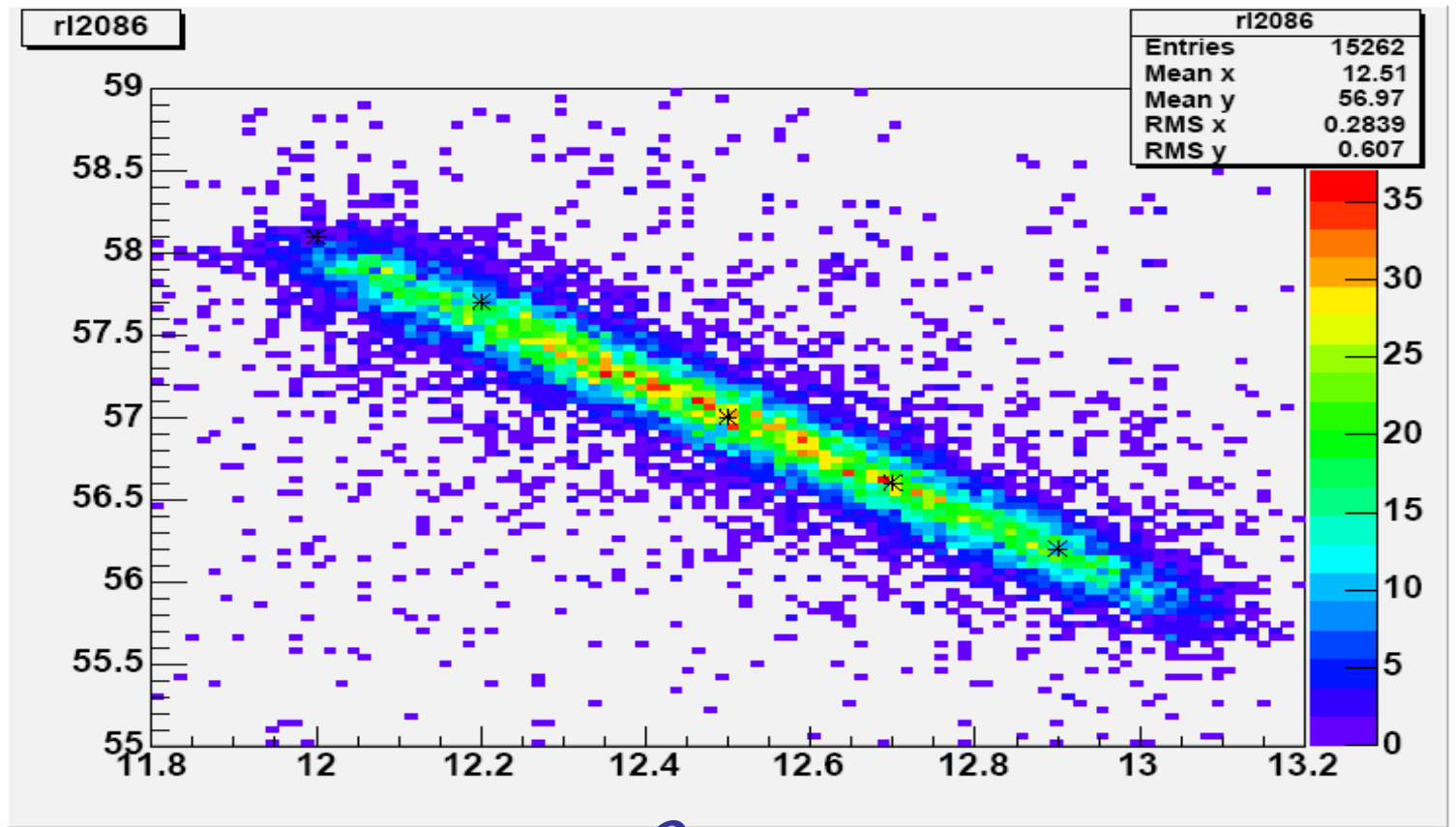
Note: starred-points are from calculation using Equation (1)

Cuts: Single track and $E_m = 8$ MeV

Not Sieve Slit Run (2086) , qq-kin



θ_p



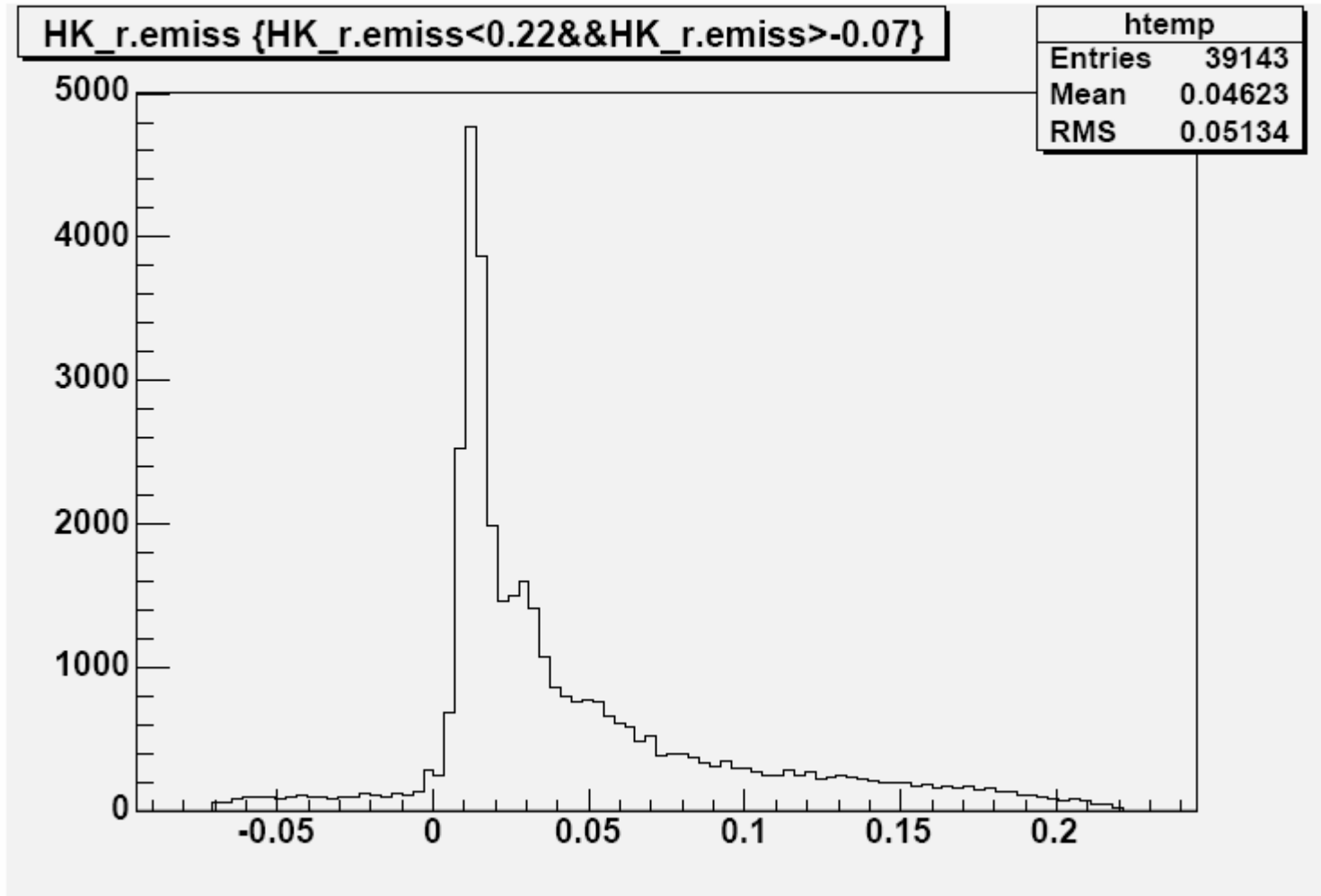
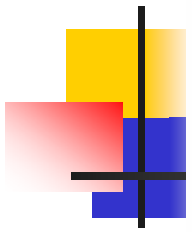
θ_e

Note: starred-points are from calculation using Equation (1)
Cuts: Single track and $E_m = 8$ MeV



Missing Energy (E_m)

Sieve Slit Run (1300), R arm

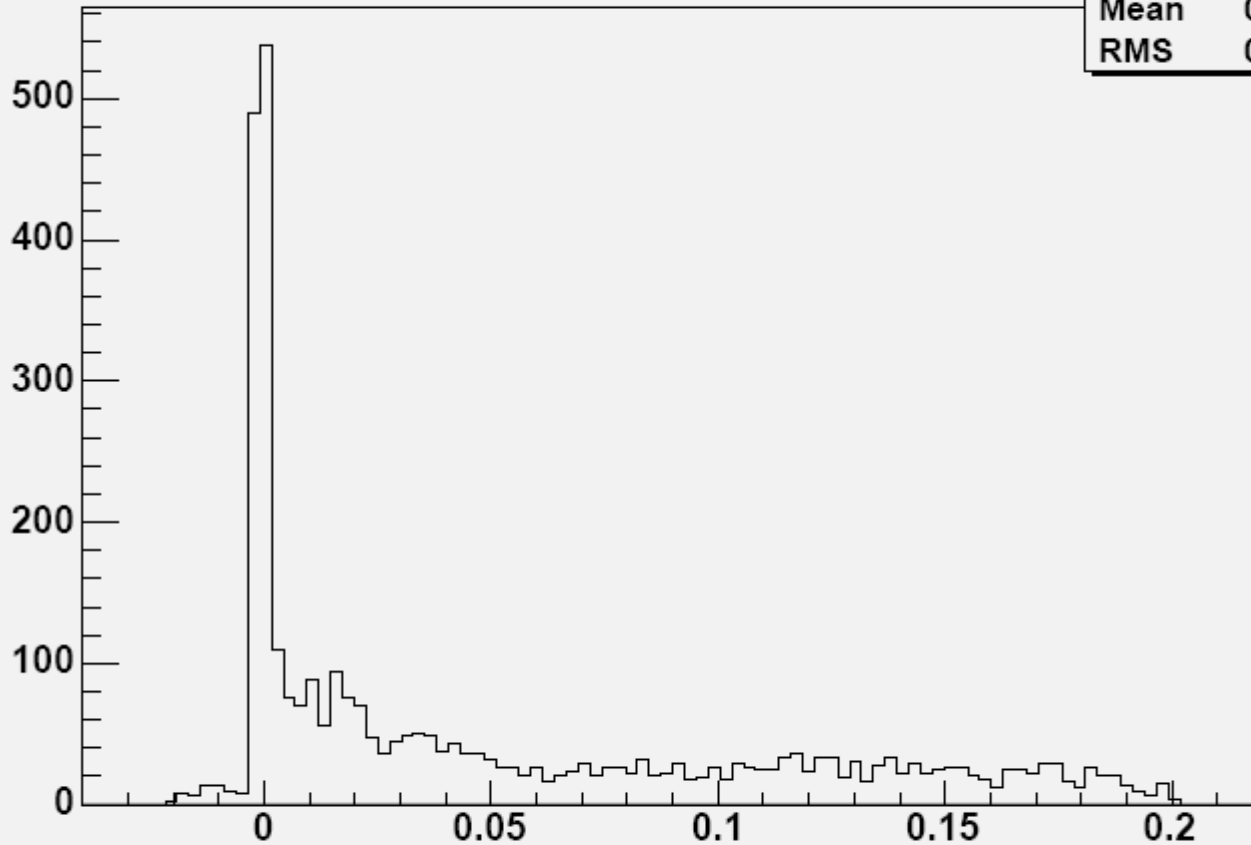


E_m

Sieve Slit Run (2801), L arm

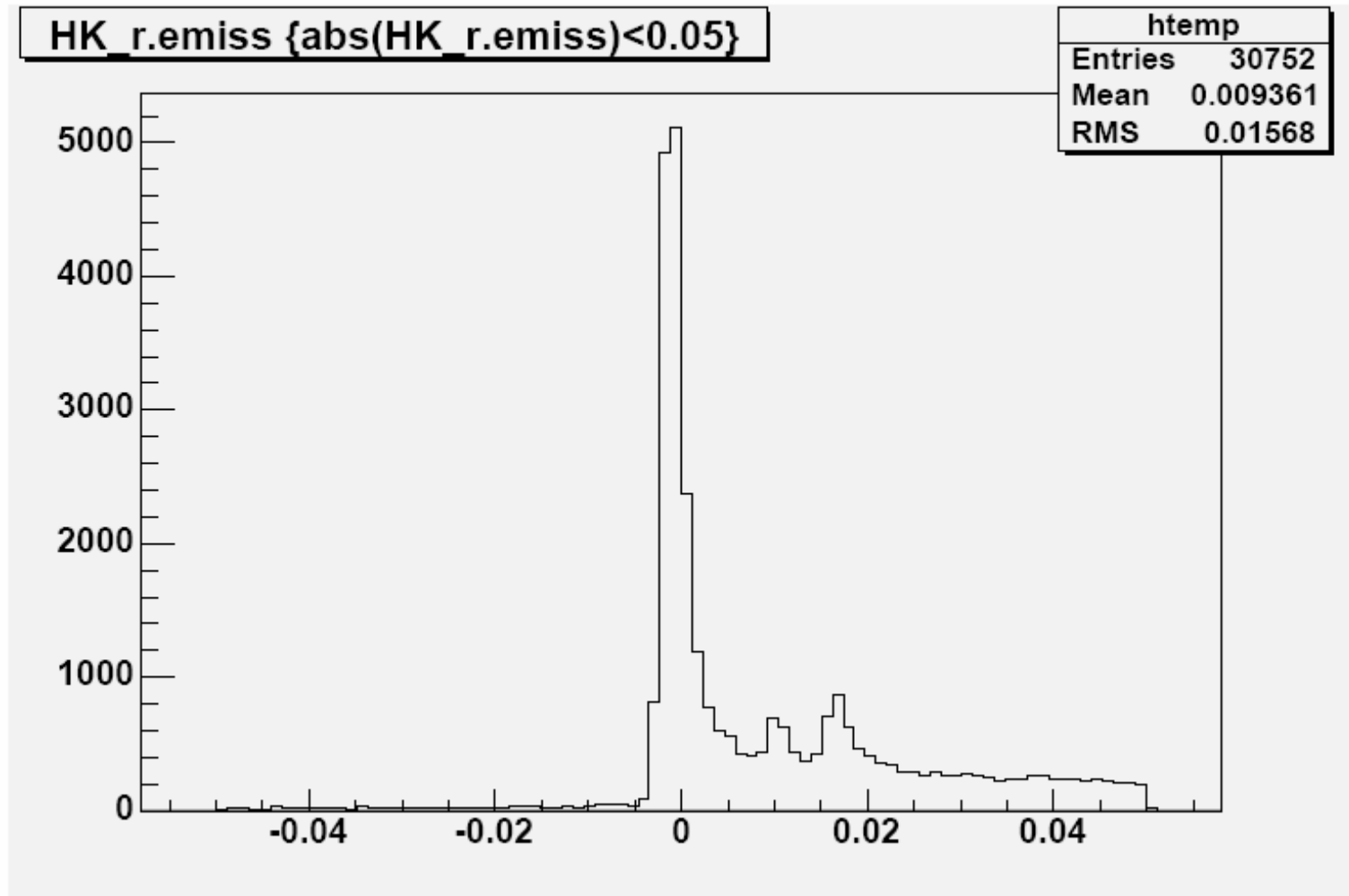
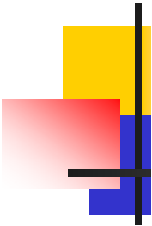
HK_r.emiss {HK_r.emiss<0.2&&HK_r.emiss>-0.02}

htemp	
Entries	3529
Mean	0.05237
RMS	0.06065



E_m

Not Sieve Slit Run (2086)

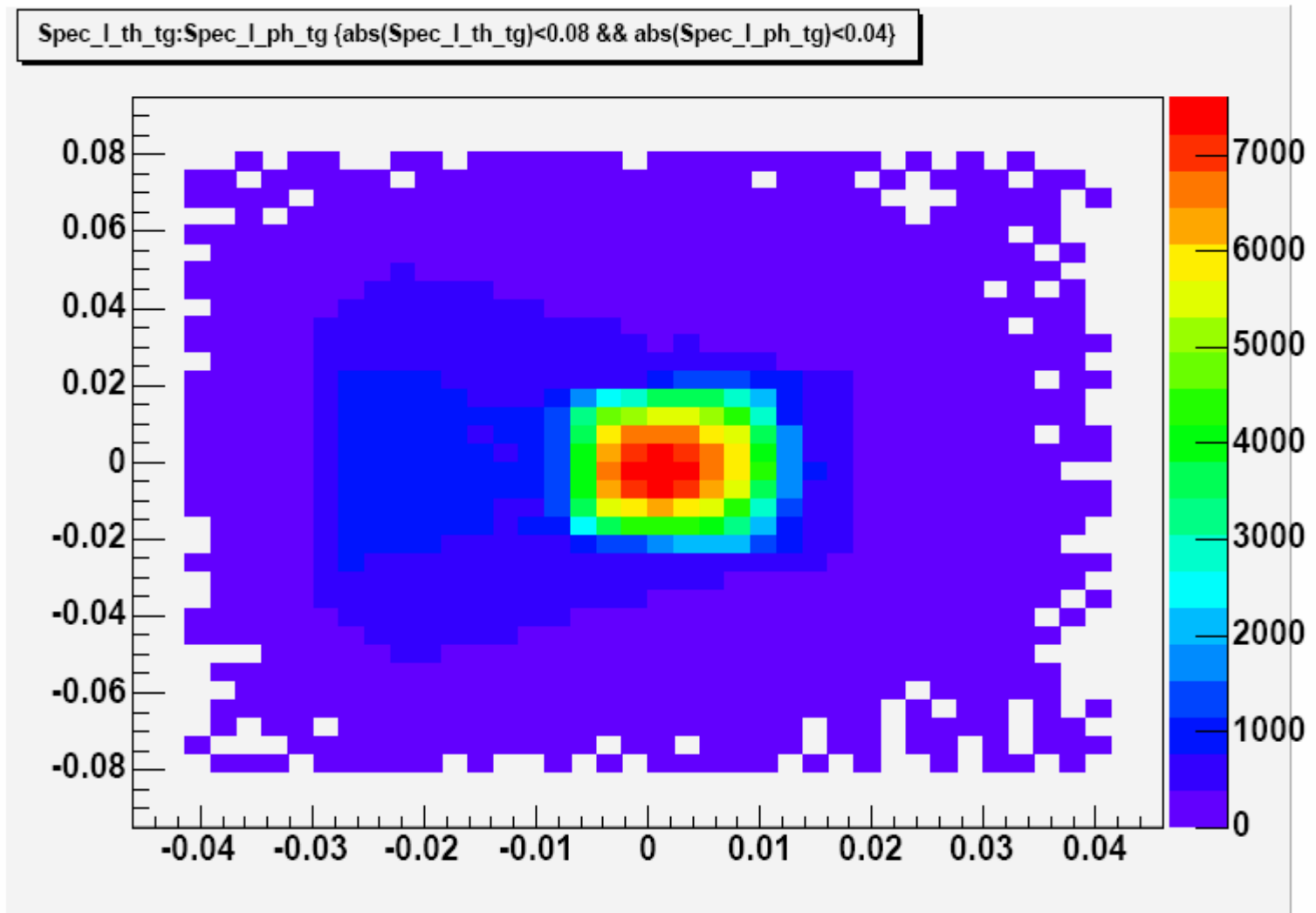
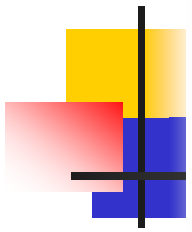


E_m



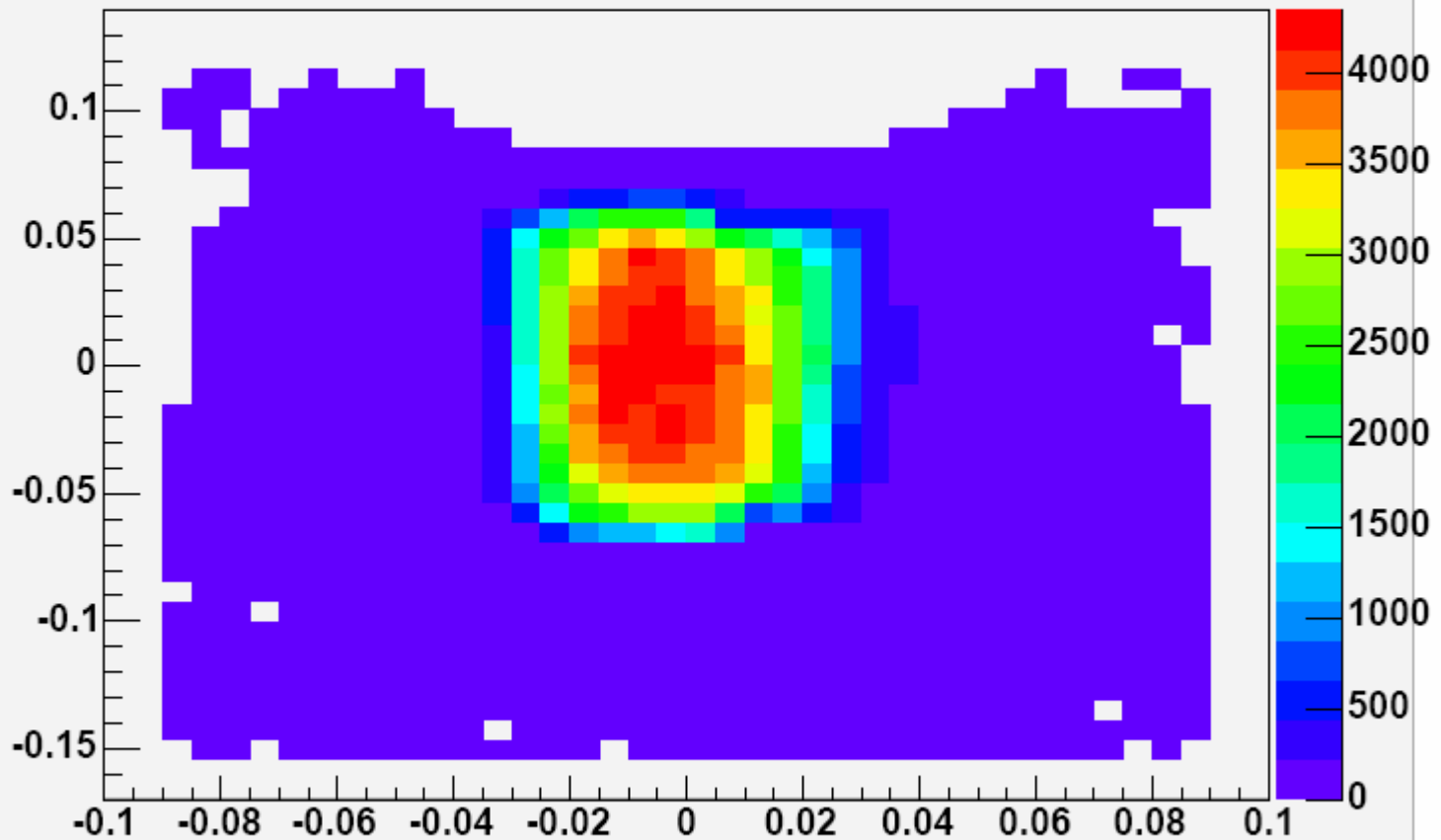
ϕ_{tg} vs θ_{tg}

ESP_L arm # 1300

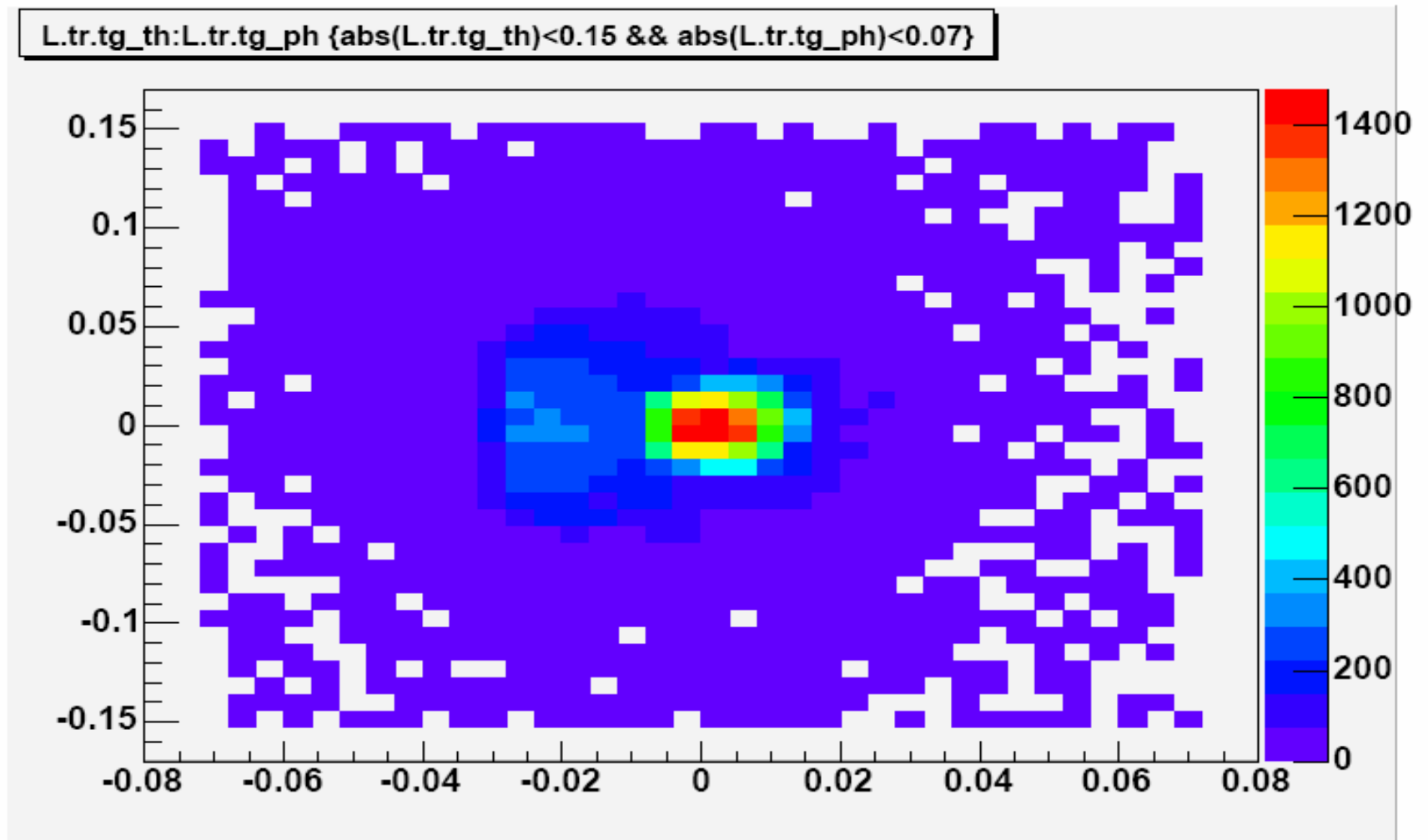


ESP_R arm #1300

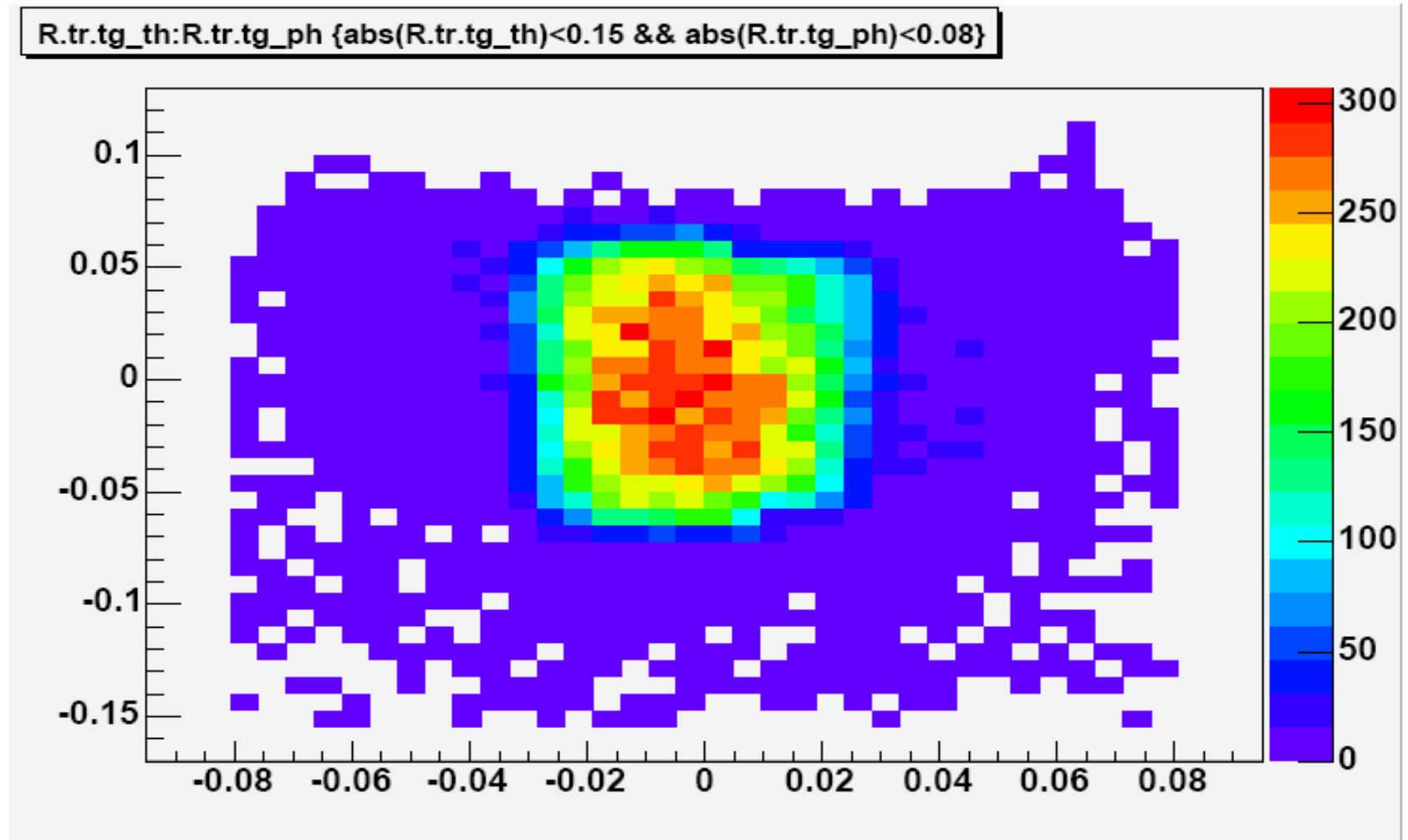
Spec_r_th_tg:Spec_r_ph_tg {abs(Spec_r_th_tg)<0.15 && abs(Spec_r_ph_tg)<0.09}



ANAL_L arm #1300

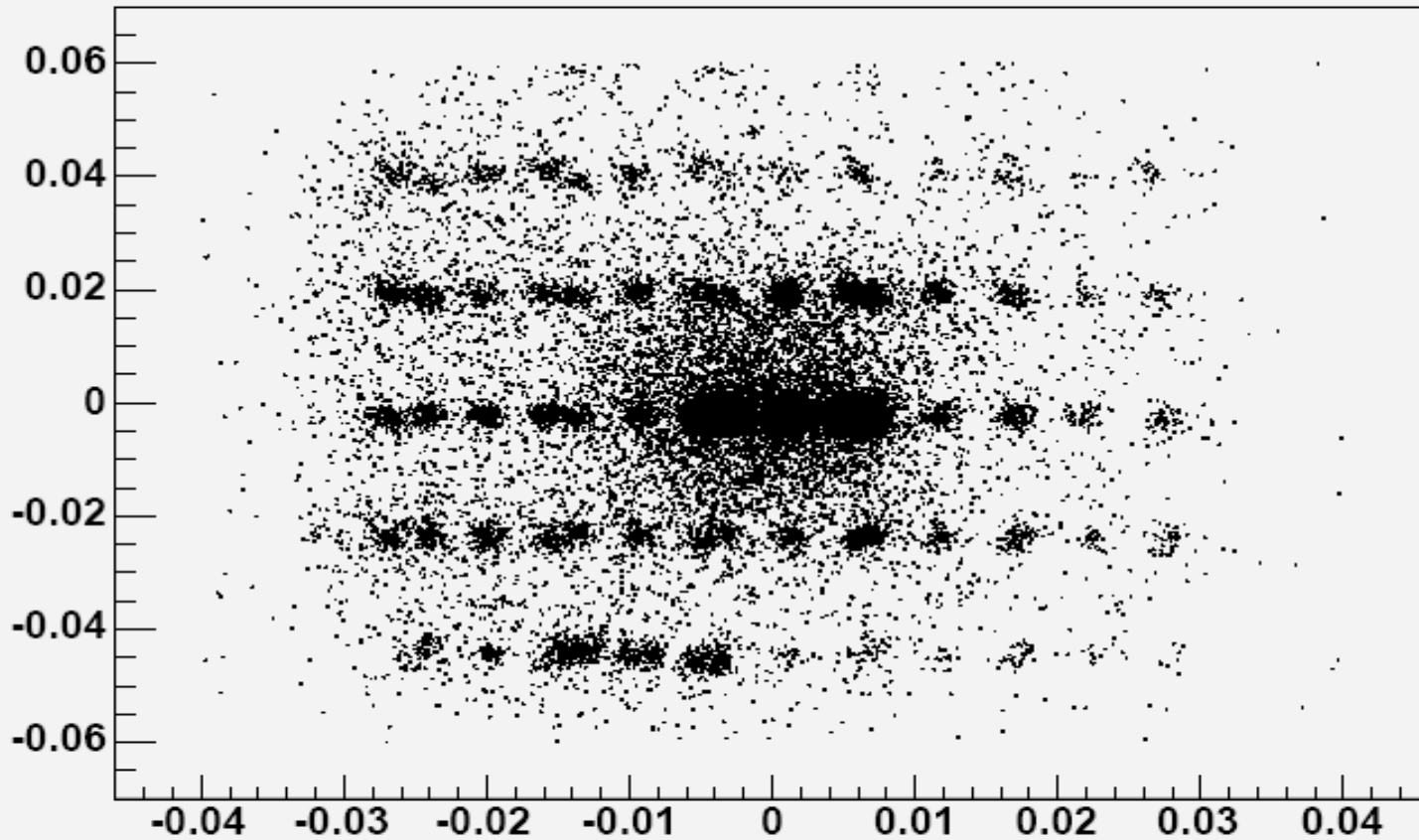


ANAL R arm #1300



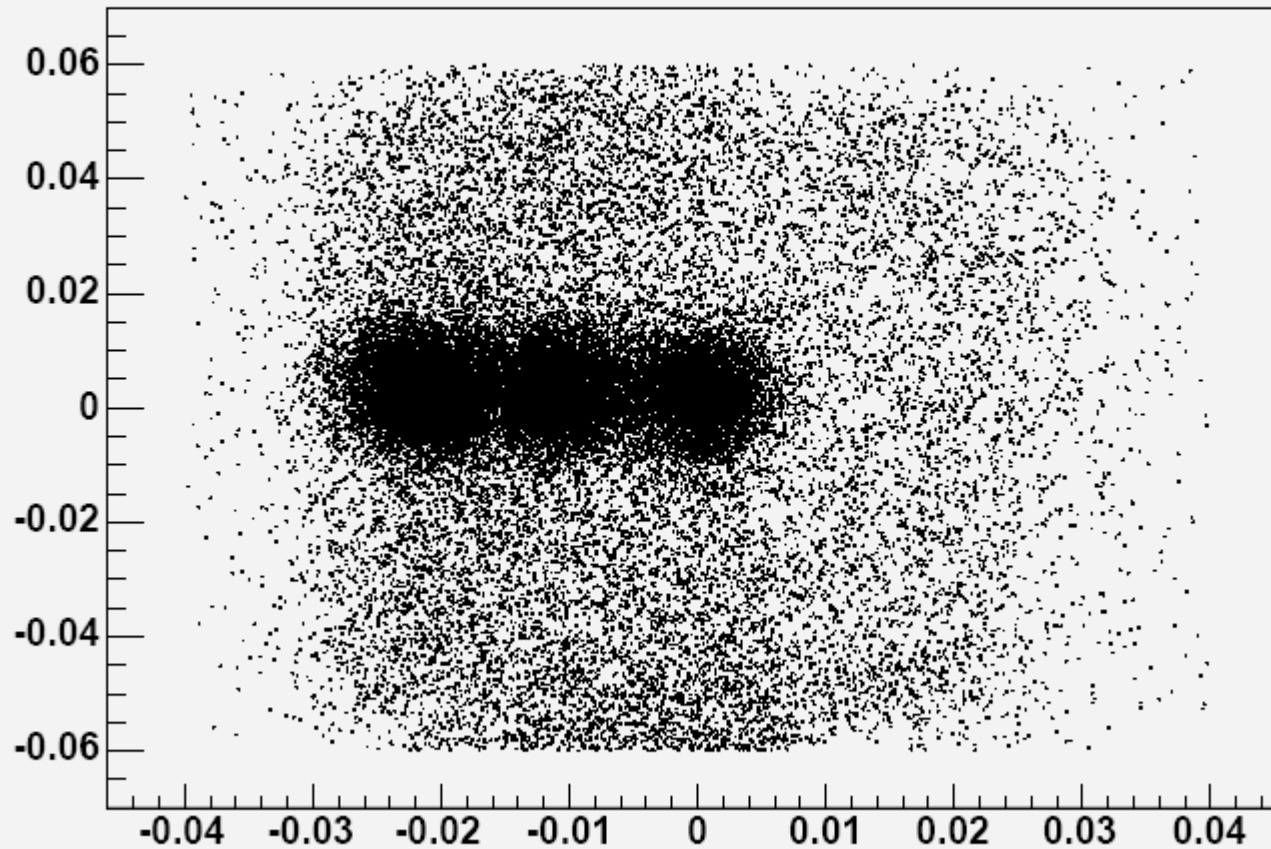
ESP_L arm #2801

Spec_l_th_tg:Spec_l_ph_tg {abs(Spec_l_th_tg)<0.06 && abs(Spec_l_ph_tg)<0.04}



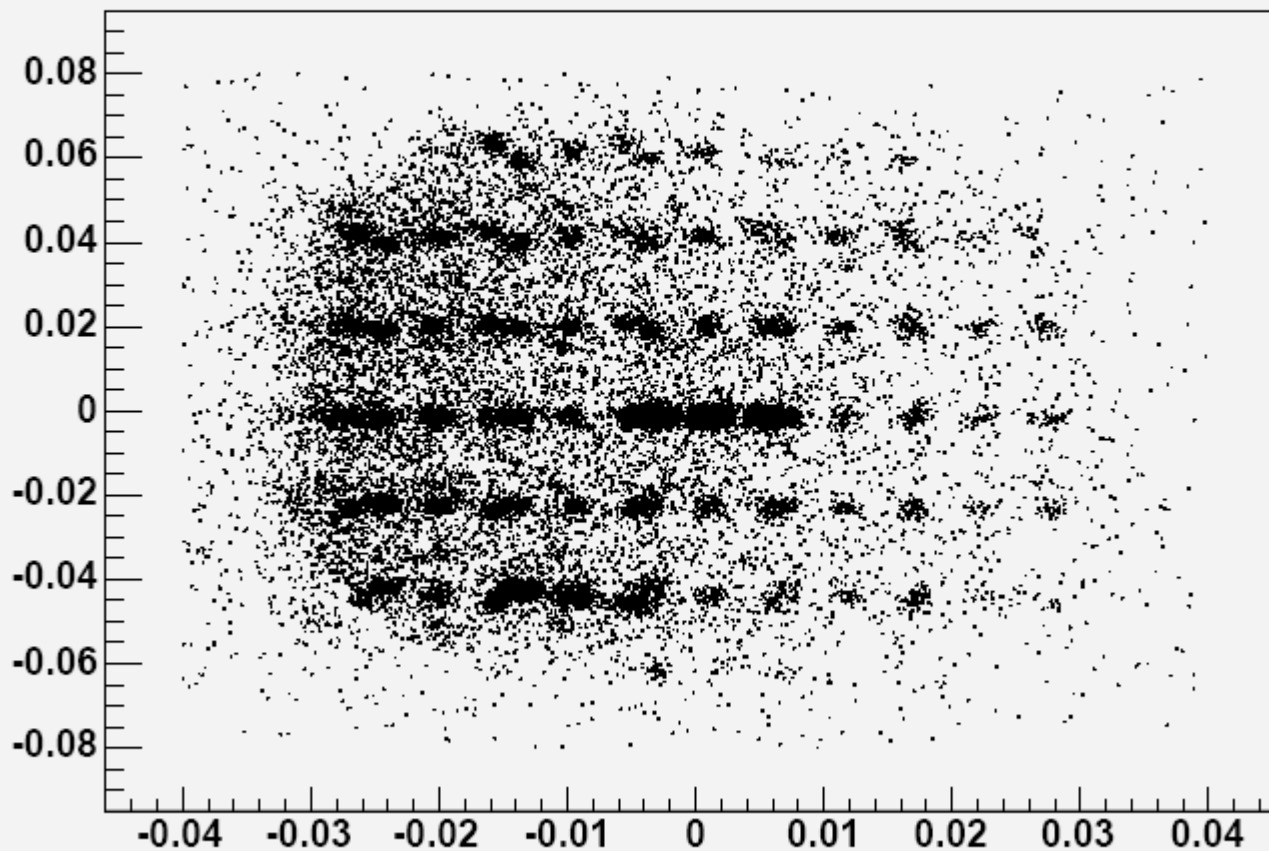
ESP_R arm #2801

Spec_r_th_tg:Spec_r_ph_tg {abs(Spec_r_th_tg)<0.06 && abs(Spec_r_ph_tg)<0.04}



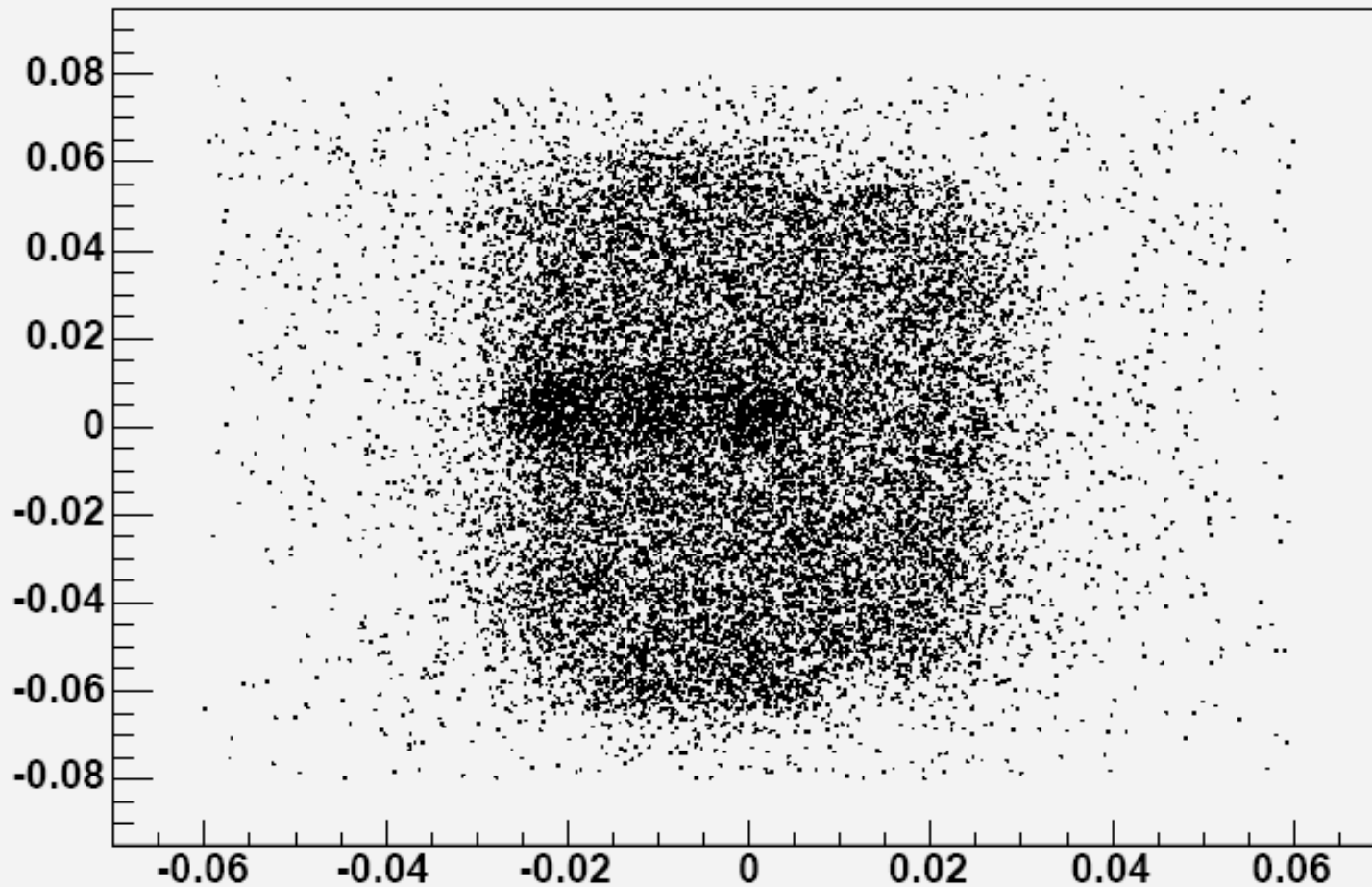
ANAL_L arm #2801

L.tr.tg_th:L.tr.tg_ph {abs(L.tr.tg_th)<0.08 && abs(L.tr.tg_ph)<0.04}



ANAL_R arm #2801

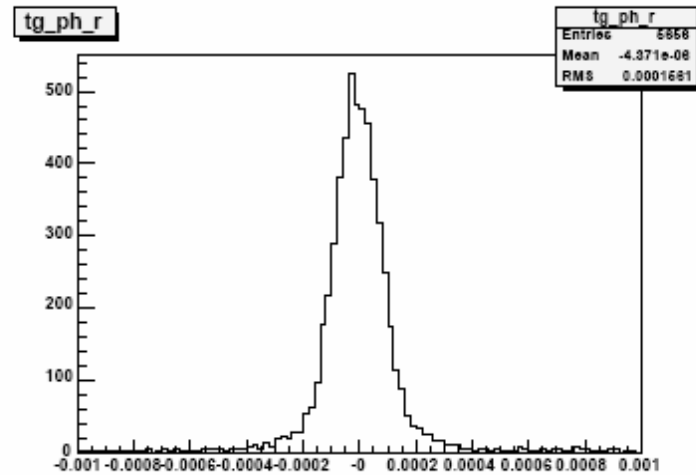
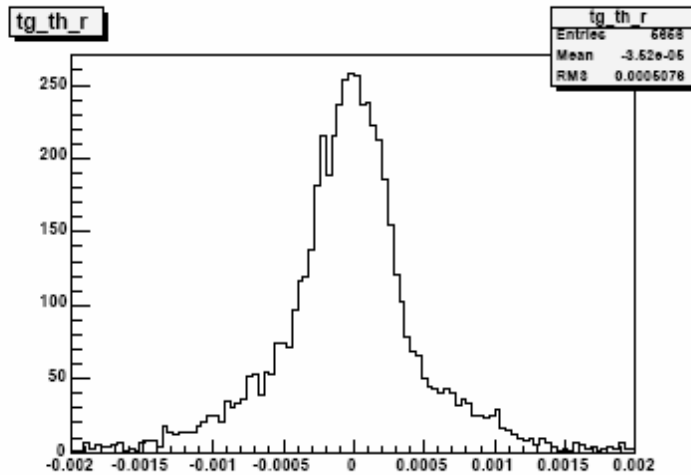
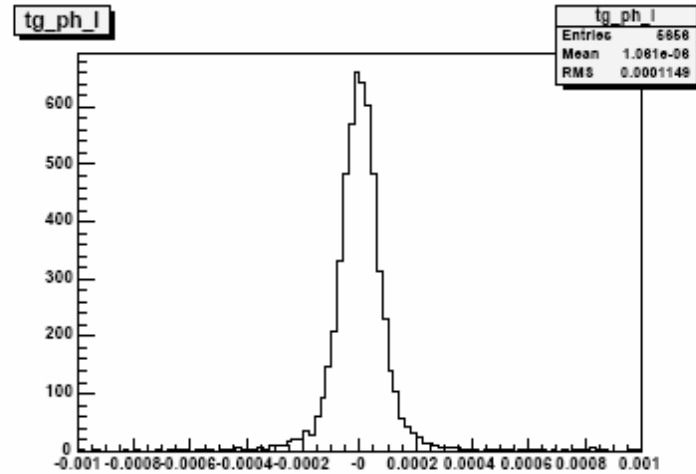
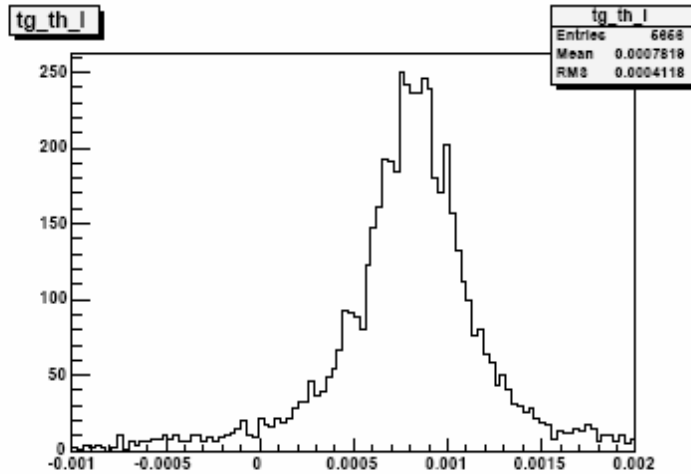
R.tr.tg_th:R.tr.tg_ph {abs(R.tr.tg_th)<0.08 && abs(R.tr.tg_ph)<0.06}





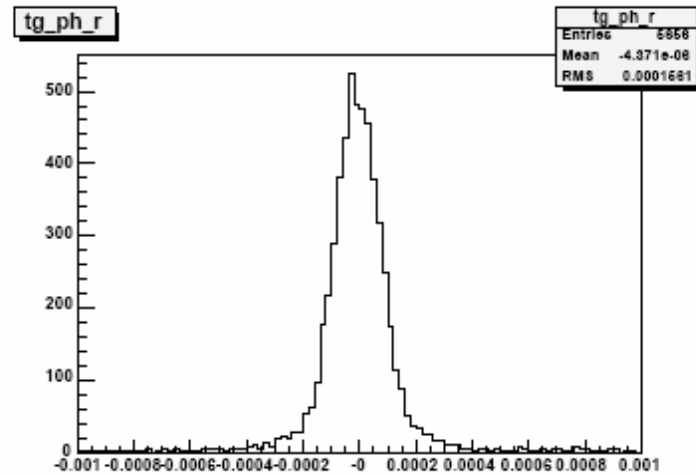
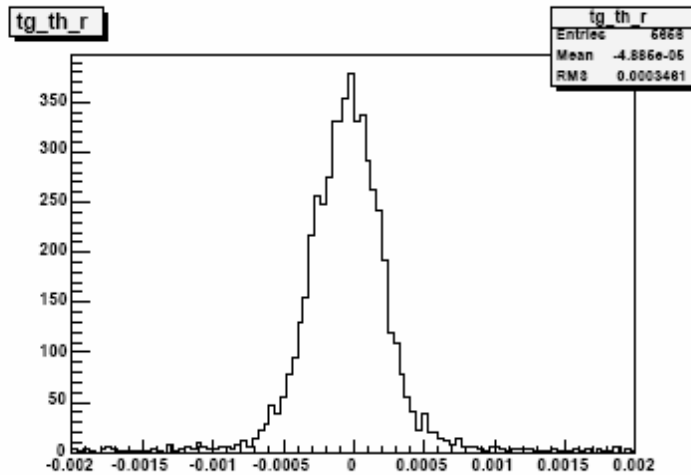
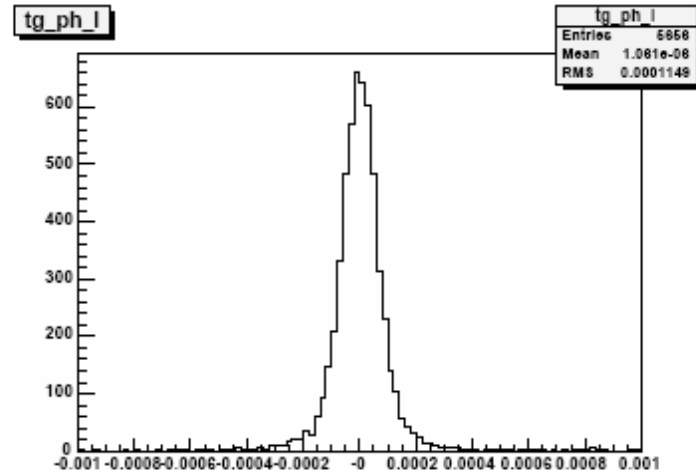
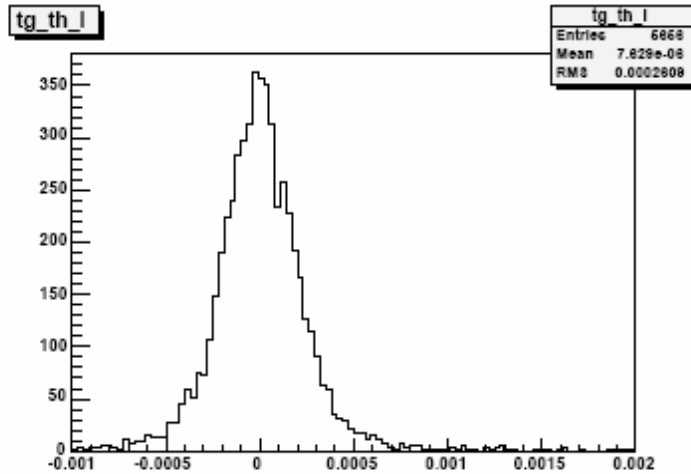
Analyzer vs Espace

Analyzer – Espace (Run # 1300)



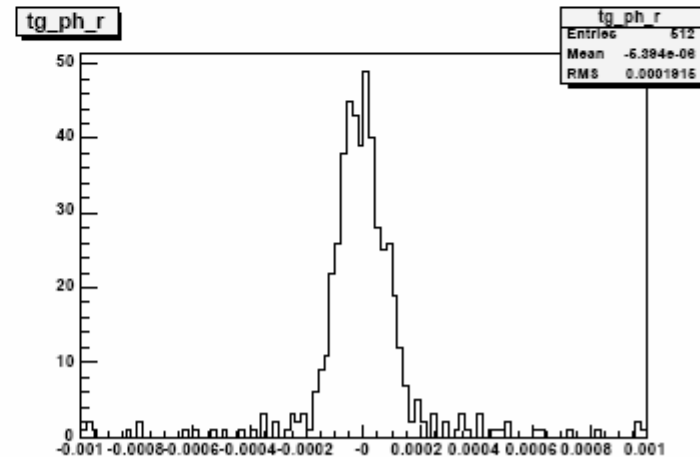
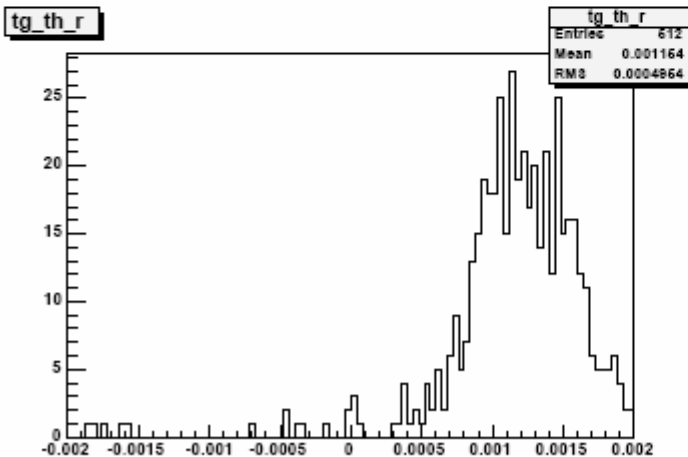
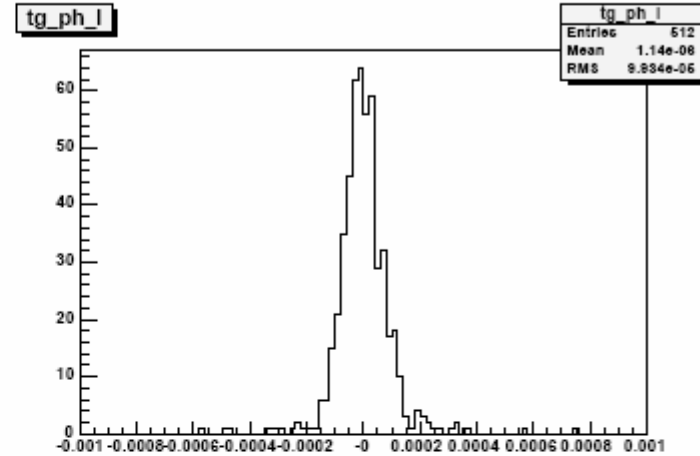
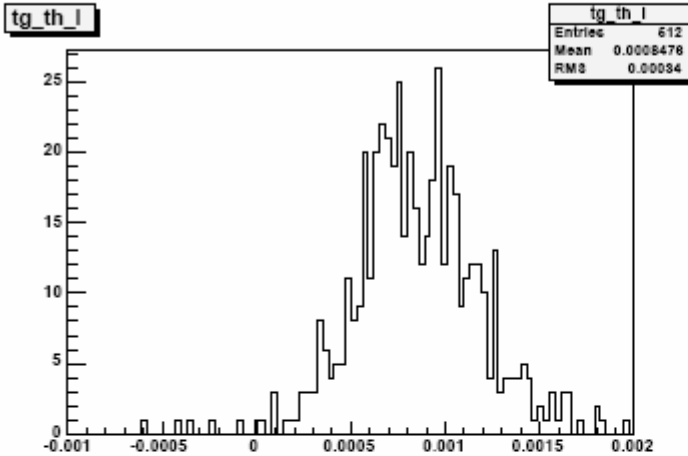
Before code changed in Espace

Analyzer – Espace (Run # 1300)



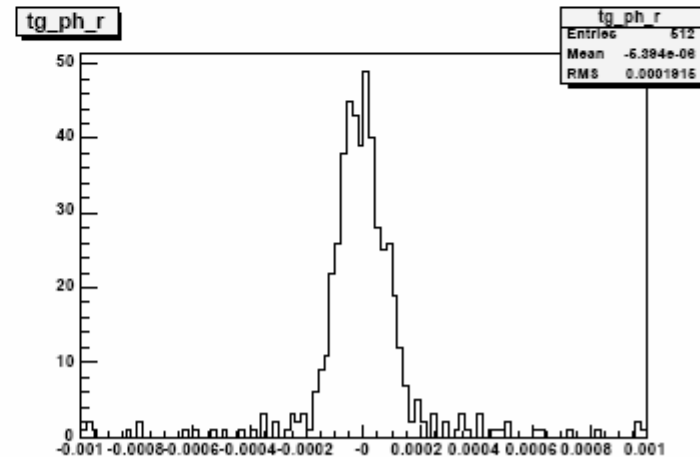
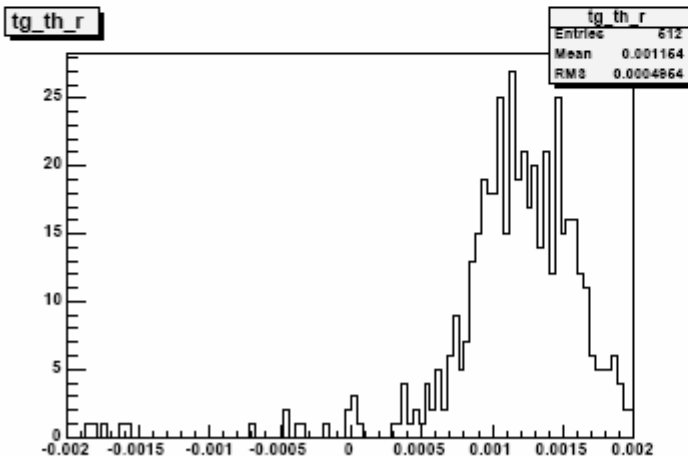
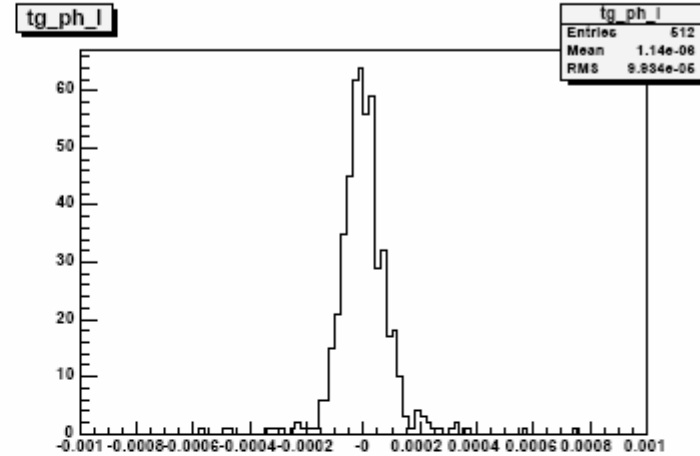
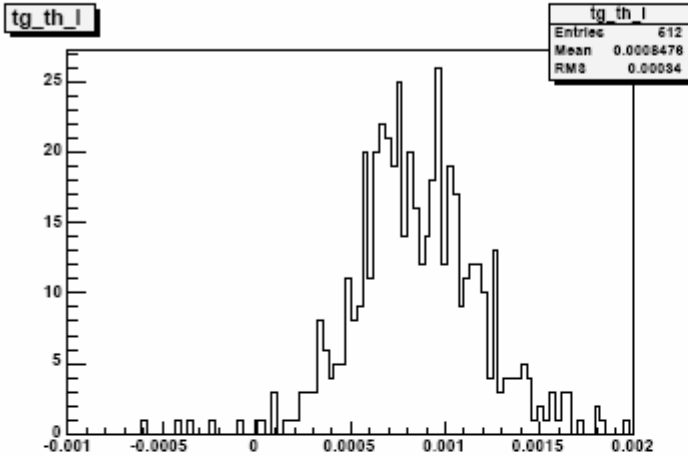
After code changed in Espace (Header's file : "Reconstruct")

Analyzer – Espace (Run # 2801)



Before code changed in Espace

Analyzer – Espace (Run # 2801)



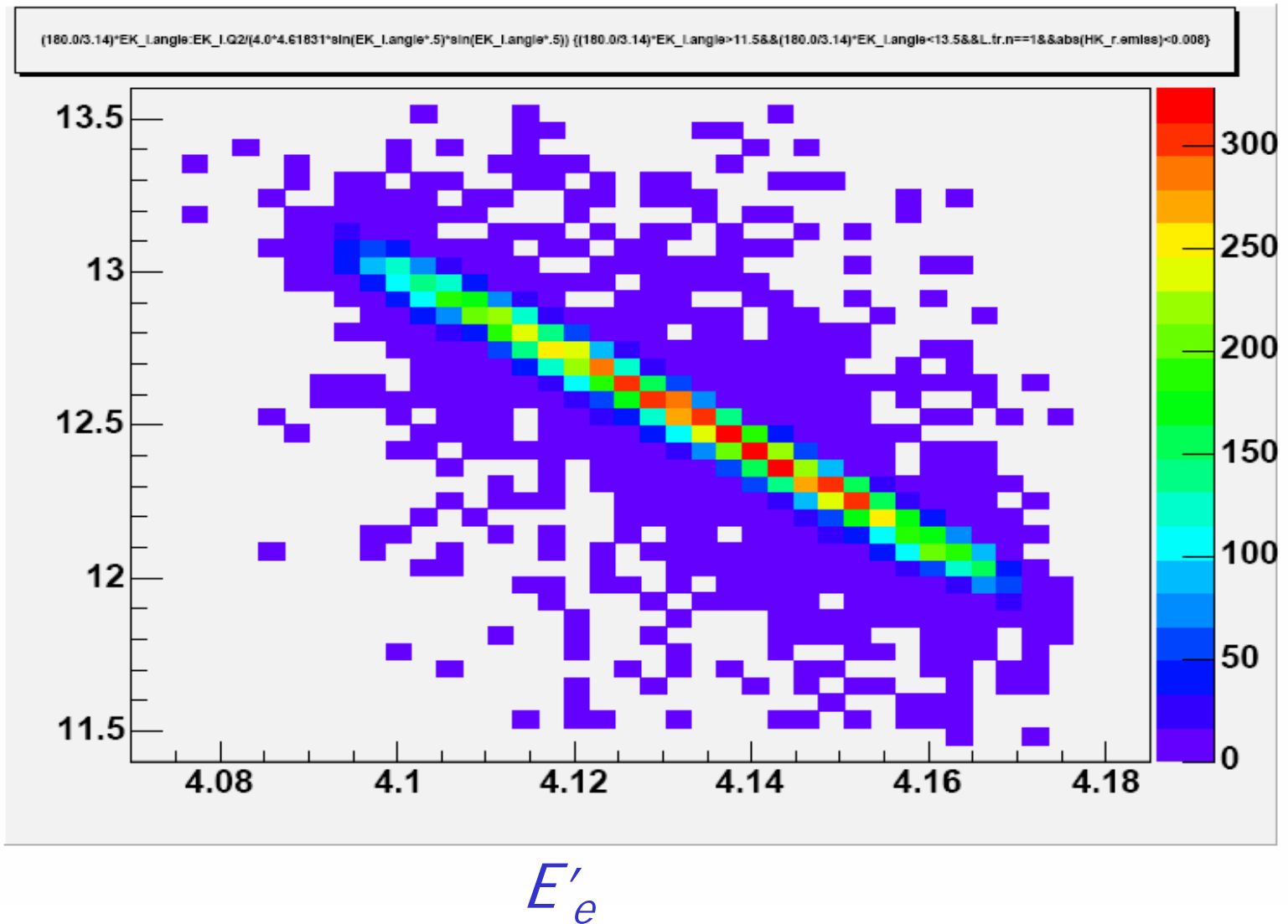
After code changed in Espace (Header's file : "Reconstruct"): **Under Investigation!**



Additional Items

Using Run # 2086

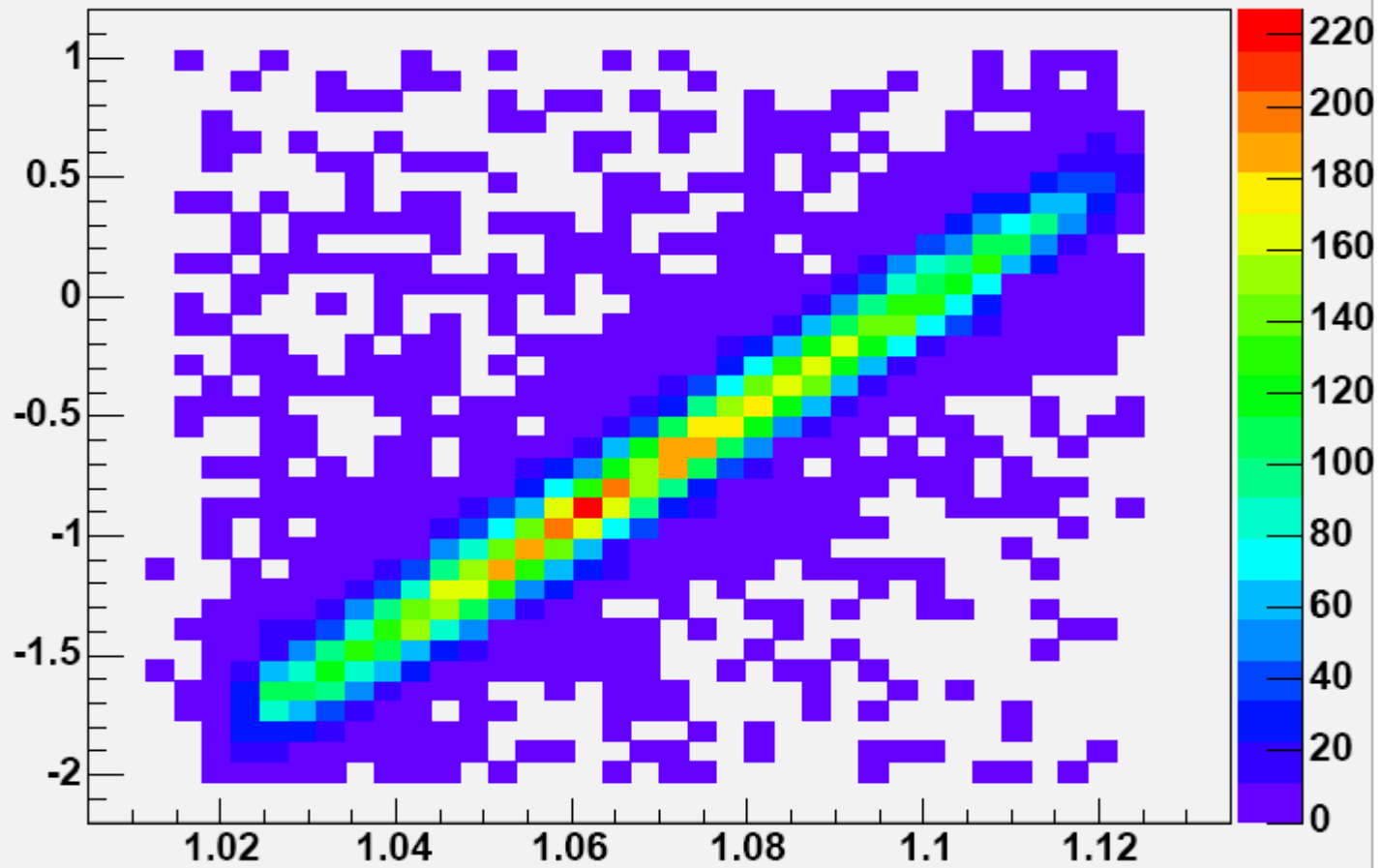
Scattered Energy of Electron



Cuts: Single track and $E_m = 8$ MeV

Proton Momentum

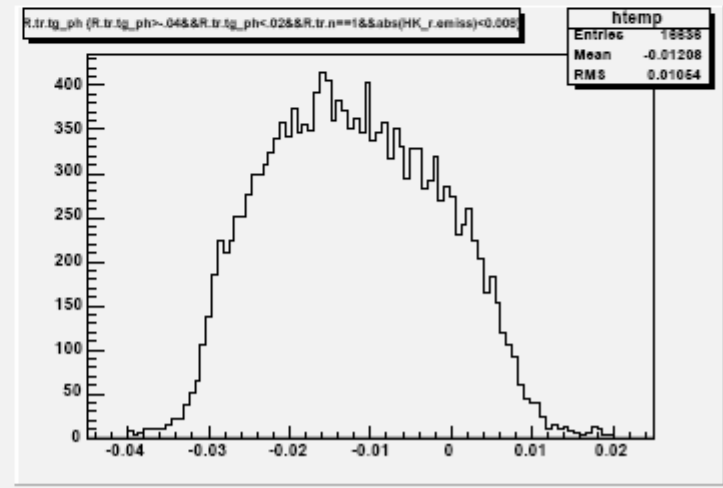
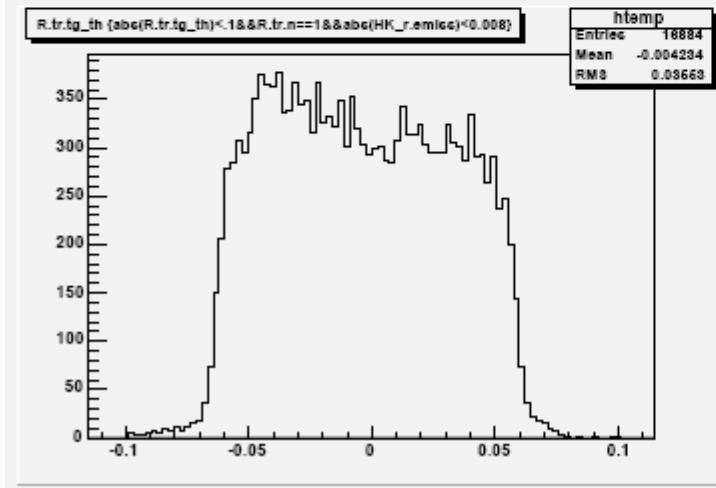
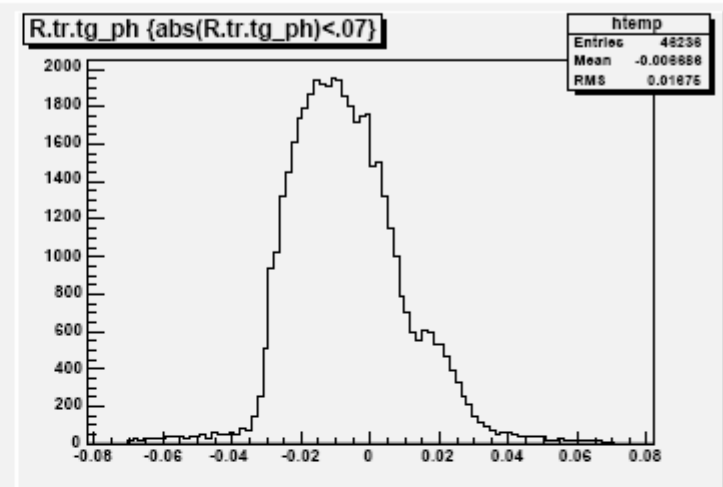
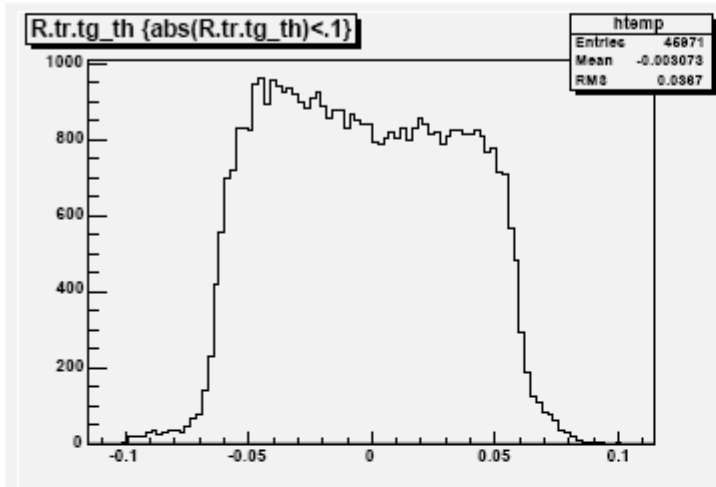
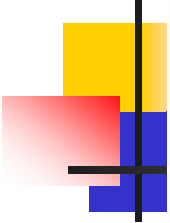
`(180.0/3.14)*R.tr.tg_ph:R.tr.p {R.tr.p>1.01&&R.tr.p<1.13&&(180.0/3.14)*R.tr.tg_ph>-2.0&&(180.0/3.14)*R.tr.tg_ph<1.0 &&R.tr.n==1&&abs(HK_r_emiss)<0.008}`



$|P'_p|$

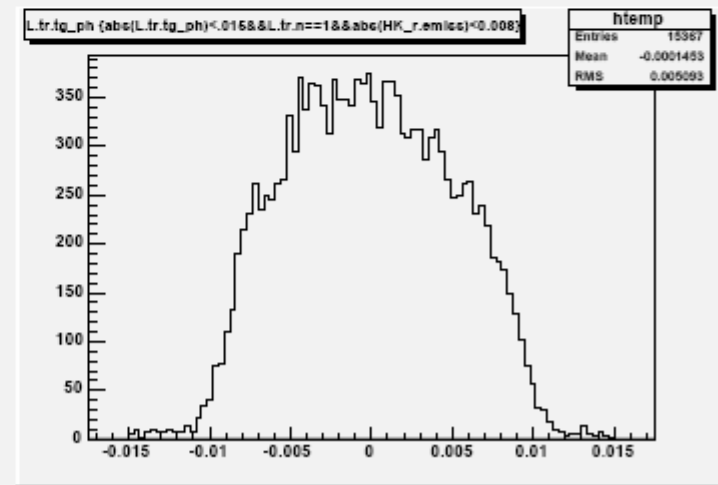
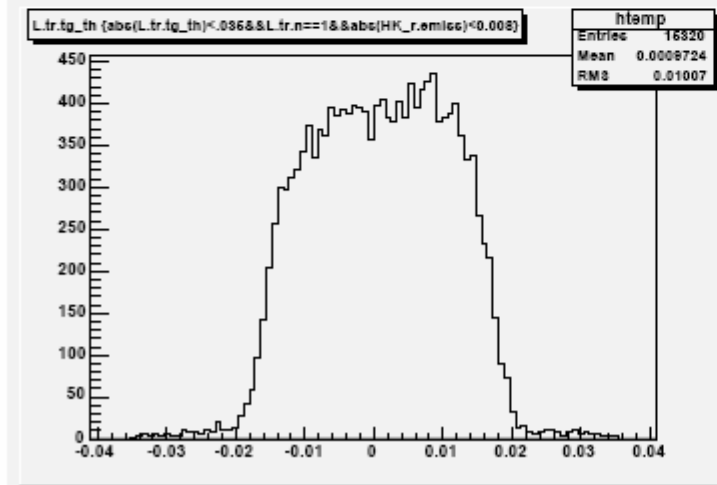
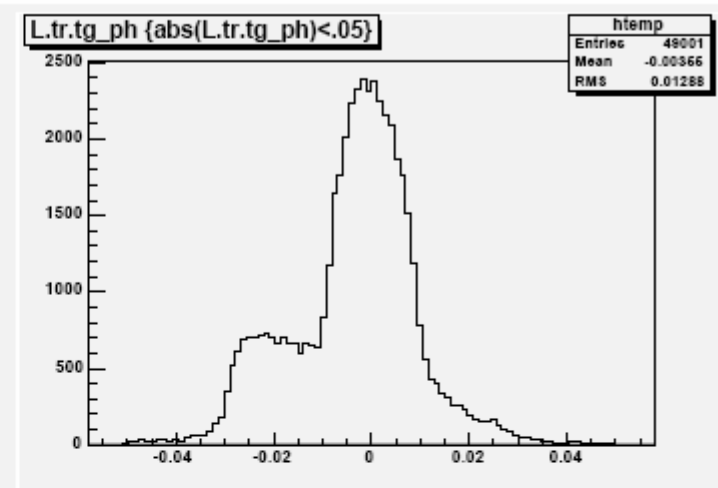
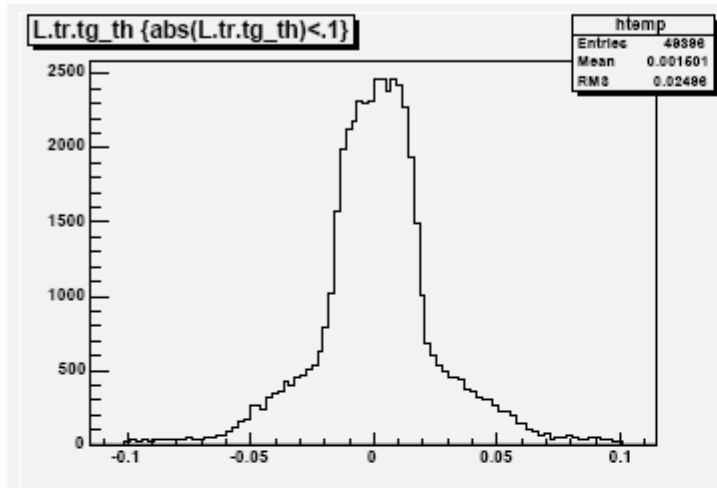
Cuts: Single track and $E_m = 8$ MeV

θ_{tg} and ϕ_{tg} (Right Arm)



Cuts: Single track and $E_m = 8$ MeV

θ_{tg} and ϕ_{tg} (Left Arm)



Cuts: Single track and $E_m = 8$ MeV